

Claims

1. A system for testing subscriber lines, comprising a broadband line testing control module and a remote terminal subscriber access control module located at a subscriber line between the broadband line testing control module and a remote terminal unit, wherein

said broadband line testing control module sending a signal of disconnecting the subscriber line to the remote terminal subscriber access control module, and testing the subscriber line;

said remote terminal subscriber access control module receiving said signal from the broadband line testing control module, and controlling the remote terminal unit to disconnect from or connect to the subscriber line based on said signal.

2. The system of claim 1, wherein said broadband line testing control module comprises:

a broadband line testing module, for sending a signal of disconnecting subscriber line, implementing performance testing for subscriber lines and obtaining testing results after the remote terminal unit is disconnected from the subscriber line; and

a remote terminal subscriber control module, for receiving the signal of disconnecting subscriber line from the broadband line testing module and forwarding it to the remote terminal subscriber access control module.

3. The system of claim 1, wherein said remote terminal subscriber access control module comprises:

a switch control module, for receiving the signal from the broadband line testing control module, and generating a control signal and transmitting said control signal; and

a remote terminal subscriber control switch, for receiving said control signal from the switch control module and disconnecting the remote terminal unit from the subscriber line based on said control signal.

4. The system of claim 3, wherein:

said switch control module comprises a timer circuit, and said timer circuit is triggered based on the signal sent by the broadband line testing control module, and determines time-out time based on the testing required time value which is carried in this signal; when overrunning the defined time-out time, the timer circuit notifies the switch control module to send the remote terminal subscriber control switch a control signal of setting it at off status;

said remote terminal subscriber control switch controls the remote terminal unit to connect to the subscriber line after receiving said control signal of setting the remote terminal subscriber control switch at off status from the switch control module.

5. The system of claim 1, wherein said remote terminal subscriber access control module is a relay.

6. The system of claim 1, wherein said broadband line testing control module is located in a Digital Subscriber Line Access Multiplexer (DSLAM);

said remote terminal subscriber access control module is located at the subscriber line between a splitter in user end and the remote terminal unit, or located at the subscriber line between the splitter in user end and the DSLAM.

7. A method for testing subscriber lines based on the system of claim 1, comprising:

A. a broadband line testing control module sending a signal of disconnecting subscriber line to a remote terminal subscriber access control module;

B. the remote terminal subscriber access control module disconnecting a remote terminal unit from the subscriber line after receiving said signal of disconnecting subscriber line; and

C. the broadband line testing control module testing the subscriber line.

8. The method of claim 7, wherein said signal is transmitted through a message based on G994.1 protocol.

9. The method of claim 7, further comprising before step A:

the broadband line testing control module sending a handshake message to the remote terminal unit, and determining whether said remote terminal unit supports the testing based on the returned message from the remote terminal unit, if yes, executing step A; otherwise ending this processing.

10. The method of claim 7, wherein:

said signal in step A carries a testing required time value;

further comprises in step B:

after receiving the signal, the remote terminal subscriber access control module triggering a timer, and determining a time-out time based on the testing required time value which is carried in said signal;

when overrunning the time-out time, accessing the remote terminal unit to the subscriber line.

11. The method of claim 7, further comprising in step B:

when disconnecting the remote terminal unit from the subscriber line, said remote terminal subscriber access control module returning a response message to the broadband line testing control module;

further comprising before step C:

the broadband line testing control module receiving the returned response message from the remote terminal subscriber access control module, and executing step C after delaying a defined time period.

12. The method of claim 7, wherein said sending a signal to a remote terminal subscriber access control module in step A is implemented through terminal managing channels of DSLAM.